outer rotor type permanent magnet rotor having north (N) and south (S) magnetic poles arranged alternately on an inner circumference of the rotor and in a rotating direction of the rotor, the stator and the rotor being in opposition to each other while an air gap is held therebetween. In the rotational electric machine, a motor-driven system is provided so that an outer rotating body such as a tire, a drum, a table or the like is mounted on an outer circumferential portion or on a side portion of the rotor.

Page 3, line 21 to page 4, line13, please amend the paragraph to read as follows:

According to a second aspect of the present invention, a rotational electric machine comprises: a stator having an annular magnetic substance, main poles provided so as to extend radially outward from the magnetic substance, windings wound on the main poles respectively, and inductors each constituted by a plurality of magnetic teeth formed at a forward end of corresponding one of the main poles; and an outer rotor type rotor constituted by a magnetic substance having magnetic teeth formed on an inner circumference thereof, the stator and the rotor being in opposition to each other while an air gap is held therebetween. In the rotational electric machine, a motor-driven system is provided so that an outer rotating body such as a tire, a drum, a table or the like is mounted on an outer circumferential portion or on a side portion of the rotor.

Page 4, lines 14-22, please amend the paragraph to read as follows:

According to a third aspect of the present invention, in a rotational electric machine according to the first and second aspects, a motor-driven system wherein an outer rotating body such as a tire, a drum, a table or the like is mounted on the outer circumferential portion or on the side portion of the rotor through an output portion of a reduction gear, the output portion being concentric with a rotation shaft and output of the rotational electric machine.

Page 5, lines 1-5, please amend the paragraph to read as follows:

According to a fourth aspect of the present invention, in a rotational electric machine according to any one of the first to third aspects, a motor-driven system is provided so that the stator has a 3-phase winding structure.

Page 5, lines 6-20, please amend the paragraph to read as follows:

According to a fifth aspect of the present invention, in a rotational electric machine according to any one of the first to third aspects, or in a rotational electric machine which is obtained by changing an outer roller type rotational electric machine according to the first or second aspects into an inner rotor type, or in a rotational electric machine of the inner rotor type and of a 3-phase HB type in which the number of rotor teeth is P, a motor-driven system is provided so that, as a voltage to be applied to the rotational electric machine, a voltage of a battery is used while the battery voltage is stepped up/down by chopping, wherein $P=m(3n\pm 1)$ in which m is the number of main poles of the stator for each phase and an integer not smaller than 1, or $P=k(6n\pm 1)$ in which 2k is the number of main poles of the stator for each phase and each of k and n is an integer not smaller than 1.

Page 5, penultimate line to page 6, line 13, please amend the paragraph to read as follows:

According to a sixth aspect of the present invention, in a rotational electric machine according to any one of the first to third aspects, or in a rotational electric machine which is obtained by changing an outer rotor type rotational electric machine according to the first or second aspects into an inner rotor type, or in a rotational electric machine of the inner rotor type and a 3-phase HB type in which the number of rotor teeth is P, a motor-driven system is provided so that a phase of current relative to a motional electromotive force of the rotational electric machine is controlled, and so that $P=m(3n\pm 1)$ in which m is the number of main poles of the stator for each phase and an integer not smaller than 1, or $P=k(6n\pm 1)$ in which

2k is the number of main poles of the stator for each phase and each of k and n is an integer not smaller than 1.

Page 6, line 14 to page 7, line 11, please amend the paragraph to read as follows:

Further, according to a seventh aspect of the present invention, in a rotational electric machine according to any one of the first to third aspects, or in a rotational electric machine which is obtained by changing an outer rotor type rotational electric machine according to the first or second aspects into an inner rotor type, or in a 3-phase rotational electric machine of an outer or inner rotor type having main poles the number of which is 3m or 6k with 3-phase windings, the rotor being of a HB type in which the number of rotor teeth is P or being of a cylindrical type in which the number of rotor poles is 2P and the cylindrical rotor is magnetized into north (N) and south (S) magnetic poles alternately, a motor-driven system is provided so that positional information of the rotor is obtained to thereby obtain timing of excitation of windings, and so that $P=m(3n\pm 1)$ in which m is the number of main poles of the stator for each phase and an integer not smaller than 1, or $P=k(6n\pm 1)$ in which 2k is the number of main poles of the stator for each phase and each of k and n is an integer not smaller than 1.

Page 7, line 12 to page 8, line 10, please amend the paragraph to read as follows:

According to an eighth aspect of the present invention, in a rotational electric machine according to any one of the first to third aspects, or in a rotational electric machine which is obtained by changing an outer rotor type rotational electric machine according to the first or second aspects into an inner rotor type, or in a 3-phase rotational electric machine of an outer or inner rotor type having main poles the number of which is 3m or 6k with 3-phase windings, the rotor being of a HB type in which the number of rotor teeth is P or being of a cylindrical type in which the number of rotor poles is 2P and the cylindrical rotor is magnetized into north (N) and south (S) magnetic poles alternately, a motor-driven system is

provided so that the axis of the rotating magnetic field is excited by the 3-phase excitation, microstep excitation or full step excitation which is advanced by γ degrees with respect to the shaft of the rotor at a present position. Here, $P=m(3n\pm 1)$ in which m is the number of main poles of the stator for each phase and an integer not smaller than 1, or $P=k(6n\pm 1)$ in which 2k is the number of main poles of the stator for each phase and each of k and n is an integer not smaller than 1.

Page 8, lines 11-14, please amend the paragraph to read as follows:

According to a ninth aspect of the present invention, a motor-driven system according to the eighth aspect is provided so that the value of γ is equal to 90° (γ =90°) in terms of electrical angle.

Page 8, lines 15-20, please amend the paragraph to read as follows:

Further, according to a tenth aspect of the present invention, a motor-driven system according to the eighth aspect is provided so that when the value of γ is in a range of $0< \gamma <= 90°$, the motor is driven as an open loop stepping motor, or when γ >90°, the motor is driven as a closed loop brushless motor.

Page 10, lines 11-15, please amend the paragraph to read as follows:

First, with reference to Figs. 1 through 3, the first embodiment of the motor-driven system according to the present invention will be described.

Page 13, lines 5-9, please amend the paragraph to read as follows:

Next, with reference to Figs. 4 and 5, a second embodiment of the motor-driven system according to the present invention will be described.

Page 15, line 1, please delete in its entirety.

Page 18, lines 17-22, please amend the paragraph to read as follows:

Incidentally, each of the motors is of an outer rotor type which is suited to an outer rotor wheel-in-motor. However, the following two driving techniques are, of course, applicable to a motor of an inner rotor type so long as the motor has multi-poles and is provided with inductors.

Page 21, lines 10-14, please amend the paragraph to read as follows:

Accordingly, for example, if a phase-locked loop control (PLL control) in which the phase of the rotor and the phase of the current are made fixed is performed, the above problem can be solved.

Page 22, lines 9-21, please amend the paragraph to read as follows:

That is, in this meaning, that which is disclosed in the fourth embodiment is a technique which is applicable to a rotational electric machine according to any one of the first, second and third embodiments; or a rotational electric machine which is obtained by changing an outer rotor type rotational electric machine according to the first or second embodiments into an inner rotor type; or a 3-phase rotational electric machine of an outer or inner rotor type having main poles the number of which is 3m or 6k with 3-phase windings, the rotor being of a HB type in which the number of rotor teeth is P or being of a cylindrical type in which the number of rotor poles is 2P and the cylindrical rotor is magnetized into north (N) and south (S) magnetic poles alternately.

Page 23, lines 5-10, please amend the paragraph to read as follows:

Thus, by knowing the current position of the rotor, current is made to flow in the coil of the windings so that a certain angle from the rotor is made to be fixed.

Page 23, line 20 to page 24, line 1, please amend the paragraph to read as follows:

Next, the fifth embodiment of the present invention and the sixth embodiment of the present invention will be described with reference to Figs.7A and 7B and Figs. 8A and 8B, respectively.

Page 26, line 12 to page 27, line 3, please amend the paragraph to read as follows:

Incidentally, with respect to the number of main poles in the fifth embodiment, similarly to the case of the fourth embodiment, this technique can be applied to a rotational electric machine according to any one of the first, second and third embodiments; or a rotational electric machine which is obtained by changing an outer rotor type rotational electric machine according to the first or second embodiment into an inner rotor type; or a 3-phase rotational electric machine of an outer or inner rotor type having main poles the number of which is 3m or 6k with 3-phase windings, the rotor being of a HB type in which the number of rotor teeth is P or being of a cylindrical type in which the number of rotor poles is 2P and the cylindrical rotor is magnetized into north (N) and south (S) magnetic poles alternately.

Page 27, lines 5-6, please amend the paragraph to read as follows:

Next, the seventh embodiment of the present invention will be described.

Page 27, line 20 to page 28, line 3, please amend the paragraph to read as follows:

In this case, if motor is made to be a closed loop brushless motor and the current is controlled so that the load angle γ takes 90°, it is possible to obtain a motor-driven system having a function as an actuator which operates as a multipole brushless motor and which is stable and causes no step-out.

Page 28, lines 17-18, please amend the paragraph to read as follows:

(1) The configuration stated in the first aspect shows the following effects.

Page 29, lines 10-15, please amend the paragraph to read as follows:

(2) The configuration stated in the second aspect can bring about the following effects. That is, besides the above-mentioned effects (1) (i)-(ii), because of the configuration that the rotor has magnetic teeth formed on the inner circumference thereof, it is possible to make the configuration simple and inexpensive.

Page 29, lines 16-18, please amend the paragraph to read as follows:

(3) If a reduction gear is provided as stated in the third aspect, it is possible to make the reduction gear small in reduction gear ratio and compact in size.

Page 29, lines 19-22, please amend the paragraph to read as follows:

(4) If the stator has a 3-phase winding structure as stated in the fourth aspect, the motor is made to be a 3-phase machine so that 3-terminal driving can be performed with star-connection or delta connection and the driving becomes simple.

Page 30, lines 4-10, please amend the paragraph to read as follows:

(5) If the configuration is made as stated in the fifth aspect, the applied voltage is stepped up/down by chopping. Accordingly, if constant current driving is performed, the motor can be made to start up at high-speed large torque driving and the voltage applied to the motor can be changed in accordance with the speed. As a result, it is possible to perform high output and high efficient driving.

Page 30, lines 11-14, please amend the paragraph to read as follows:

(6) If the phase of current is controlled with respect to the motional electromotive force of the rotational electric machine as stated in the sixth aspect, it is possible to perform driving with the optimum torque in accordance with the speed.

Page 30, lines 15-19, please amend the paragraph to read as follows:

(7) If the configuration is made as stated in the seventh aspect, by realizing this configuration in a 3-phase machine, it is possible to provide an actuator which is excellent in efficiency with low vibration, compared with a conventional case (2-phase machine).

Page 30, line 20 to page 31, line 4, please amend the paragraph to read as follows:

(8) If the configuration is made as stated in the eighth or ninth aspects, the excitation current waveform of the 3-phase machine can be made to be not only rectangular waveform with 120°current conduction but also stepwise waveform of microsteps or